our enthusiastic appreciation of the character of the discussion. There is much inspiration for the right sort of entomology to be got from reading these eighty and odd pages.

It is that part of the work as yet unreferred to which alone is indicated by the title of the book. Much of the inspiration gained from the perusal of the introductory chapters would be lost if the purely systematic part of the work were not treated consistently with the author's beliefs. But the treatment is consistent. The Bombycine family Notodontidæ, including, according to Dr. Packard's delimitation of the group, '21 genera and about 78 species,' found in America, north of Mexico, is the subject of a careful monograph. The biology of each species is given as fully as known, a special attention being paid to the details of larval markings and armature. It is hardly necessary to say that careful descriptions of immature stages "in the light of the recent very suggestive and stimulating work of Weismann, entitled 'Studies in the Theory of Descent,'" are not so common in monographs of Lepidopterous families that, met with, they should pass without comment. Such treatment is distinctly rare. The detailed descriptions of these immature stages are supplemented by a splendid series of colored plates of larval forms. There are also a series of plates of wing venation, some figures of the external anatomy of the heads of imagines and a number of maps showing the geographical distribution of the family.

The book is a valuable one for its point of view as well as for the actual matter of it. American entomology will be helped by it in reputation and in inspiration.

Vernon L. Kellogg.
Stanford University, Calif.

Determinative Mineralogy and Blowpipe Analysis. By George J. Brush. Revised and enlarged by Samuel L. Penfield. New York, John Wiley & Sons. 1896. Pp. 163 and 33 double pages of tables. $3.50.

Mineralogists, metallurgists and students in these branches of science, who have been using the former edition of this book, on accoun of the value of text and tables, will gladly welcome this revised edition.

In this new edition, the text has been thoroughly revised and for the most part new material has been substituted. The work has been greatly enlarged by the addition of a new chapter and by the expansion of the chapter on 'The Reactions of the Elements.'

In the introductory chapter, the author has very clearly and concisely explained and defined the commoner terms and names used in mineralogy and also those in chemistry, necessitated by the study of the chemical character of the minerals.

The second chapter has been devoted, (1) to a description of the blowpipe apparatus "which is necessary or convenient for making the simple tests for the identification of the elements and the determination of the minerals;" (2) to the reagents commonly employed in the study of minerals; (3) 'to the nature and use of flames.' There is here a very full and clear description of the character and use of the different flames, well illustrated with cuts and descriptions of experiments on the composition and use of the different parts of the flame.

In the chapter on the reactions of the elements, which occupies nearly one hundred pages of the text, the elements have been taken up alphabetically, for convenience of reference. In connection with each of the elements, a short description is given of their occurrence and rarity. The tests described, which include a great many new ones especially devised for this work, have all been carefully verified by the author, and are applicable for the elements in their many forms of combination. Many of the old tests have been simplified and improved, and details are given concerning methods of manipulation in making many of the tests, which will be found exceedingly useful. This part of the book will be greatly appreciated by mineralogists on account of the thorough and exhaustive work that has been done in bringing the text up to date. In connection with most of the elements, experiments are very carefully described, by which the tests can be very characteristically illustrated. This adds greatly to the value of the work as a text-book. To facilitate the use of the work as such and also as a book of reference, the descriptions of the rarer elements are given in fine print, as well

as the experiments and "conspicuous headlines and catchwords have been freely used."

Another part of the work that has been most conveniently and systematically arranged is the chapter on 'The Important Blowpipe and Chemical Reactions.' It consists of a tabulated arrangement of the reactions observed and is 'intended to be used especially for the interpretation of unknown reactions which are encountered in blowpipe analysis,' and it can be made to serve as a course in qualitative blowpipe analysis in examining unknown substances.

The chapter introductory to the tables as well as the tables are the same as in the former edition, but as stated by the author in the preface: "A complete revision of the tables for the determination of minerals will be made as soon as possible, and a short chapter on crystallography and the physical properties of minerals will be prepared."

One feature of the book that especially commends it to the mineralogist is that in the tests taken up, no one arbitrary method is employed, but the best ones, whatever their character, are described, thus making the work general and covering all the physical, chemical and blowpipe tests useful for the identification of the elements and minerals.

J. H. PRATT.

YALE UNIVERSITY.

SOCIETIES AND ACADEMIES.

ENTOMOLOGICAL SOCIETY OF WASHINGTON.

DECEMBER 3, 1896.

R. H. PETTIT, St. Anthony Park, Minn., and F. A. Sirrine, Jamaica, N. Y., were elected Corresponding Members.

Under the head of exhibition of specimens, Mr. J. D. Patten showed living examples of *Lasioderma serricorne*, and exhibited a cigar from which the beetles had emerged. Mr. Ashmead exhibited a small collection of micro-Hymenoptera, made by Mr. Townsend at San Rafael, Mexico. Mr. Howard exhibited specimens of two new Coccidæ allied to *Icerya*.

A paper by Mr. T. D. A. Cockerell was read which consisted of notes on the recently published No. 1, Volume IV., of the Proceedings of the Society.

In the discussion of this paper the fact was brought out by Messrs. Ashmead and Schwarz that *Eciton* and *Labidus* are unquestionably distinct and that the true female of *Eciton* has been found in North Carolina by the Rev. P. Jerome Schmidt, who has had a good drawing of it in his possession for at least two years.

Mr. Schwarz presented some notes on the 'Lerp Insects' (Psyllidæ) of Australia. After reviewing the literature on the subject he discussed the various forms of cases spun by these Psyllid larvæ on the leaves of Eucalyptus trees, illustrating his remarks with drawings and exhibition of specimens. For the more or less conical larval cases which on the surface are provided with longitudinal ribs Signoret's generic name, *Spondyliaspis*, has to be accepted and includes the *Psylla eucalypti*, described by Dobson. The remarkable structure of the first joint of hind tarsi already observed by Dobson as well as the structure of the hind tibiæ, the posterior apical edge of which is produced into a stout mucro, fully justify the erection of a new sub-family under the name Spondyliaspinæ for *P. eucalypti* and congeneric species. Another Psyllid, the larvæ of which weaves the beautiful shell-like structures described by Dobson as his third form of lerp, was made by Mr. Schwarz the type of a new genus and species under the name *Cardiaspis artifex*.

This paper gave rise to an animated discussion participated in by Messrs. Gill, Stiles, Howard and Schwarz, on the advisability or necessity of the adoption of generic and other names based upon excretions of or structures formed by insects or their larvæ and by other animals, the animals themselves being unknown. The general opinion seemed to be that where such a structure or secretion is an expression of morphological character it has sufficient taxonomic value to carry the name.

L. O. HOWARD,
Secretary.

ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

THE 254th regular meeting of the Anthropological Society was held Tuesday evening, December 1, 1896.

The first paper, by Mr. Arthur Bibbins, Professor of Geology of the Women's College of